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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/579,319	05/16/2006	Karci Krizanovic	1382.021USU	6554
27623 7590 06/13/2007 OHLANDT, GREELEY, RUGGIERO & PERLE, LLP ONE LANDMARK SQUARE, 10TH FLOOR STAMFORD, CT 06901			EXAMINER YOUNG, SHAWQUIA	
			ART UNIT 1626	PAPER NUMBER
			MAIL DATE 06/13/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/579,319	Applicant(s) KRIZANOVIC ET AL.	
	Examiner Shawquia Young	Art Unit 1626	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/16/06</u> | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

Claims 1-9 are currently pending in the instant application.

### **I. *Priority***

The instant application is a 371 of PCT/SK04/00018, filed on December 23, 2004 and claims benefit of Foreign Application SLOVAKIA PP 1616-2003, filed on December 23, 2003.

### **II. *Information Disclosure Statement***

The information disclosure statement (IDS) submitted on May 16, 2006 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement has been considered by the examiner. See Applicants' PTO-1449 Form.

### **III. *Rejections***

#### ***35 USC § 103 - OBVIOUSNESS REJECTION***

The following is a quotation of 35 U.S.C. § 103(a) that forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

*Graham v. John Deere Co.* set forth the factual inquiries necessary to determine obviousness under 35 U.S.C. §103(a). See *Graham v. John Deere Co.*, 383 U.S. 1, 148

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USPQ 459 (1966). Specifically, the analysis must employ the following factual inquiries:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Alicot, et al.*, US Patent No. 4,371,698 (February 1, 1983). Applicants claim a method of obtaining 2-mercaptobenzothiazole from a melt of the raw product prepared by the reaction of aniline, carbon disulphide and sulphur by pressure synthesis in a reactor, where the melt contains 2-mercaptobenzothiazole, unreacted raw materials, intermediate products and pitches, characterized in that after reaching a stationary state of the reaction medium it includes the following steps:

a) crystallization of the 2-mercaptobenzothiazole raw product from an aniline solution,

b) dividing the liquid phase from crystallization from step a) in three parts,

c) removing one part of the liquid phase from crystallization from step a) out of the process,

d) returning one part of the liquid phase from crystallization from step a) into the reactor for preparation of the raw product and supplementing it with sulphur and carbon disulphide with respect to aniline,

e) final purification of the crystallized 2-mercaptobenzothiazole from step a) in the aniline liquid phase and separation of the pure 2-mercaptobenzothiazole,

f) using the third part of the liquid phase from crystallization from step a),

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supplemented with the liquid phase from final purification from step e) and possibly with aniline for crystallization of a further batch of the 2-mercaptobenzothiazole raw product,

g) using the liquid phase from final purification from step f), together with a part of the liquid phase from step e), possibly with aniline, for crystallization of the 2-mercaptobenzothiazole raw product,

h) repeating steps a) to g).

**The Scope and Content of the Prior Art (MPEP §2141.01)**

*Alicot, et al.* teaches the purification of mercaptobenzothiazole. The reference reads on a process for the purification of mercaptobenzothiazole which comprises the steps of adding aniline to the crude product resulting from the reaction of aniline, sulfur and carbon disulfide in the reactor where the synthesis took place. The reference further teaches in detail the purification in three stages. Stage 1 comprises the addition of aniline to the crude reaction product to precipitate out the mercaptobenzothiazole. Stage 2 comprises filtration and washing in aniline of the precipitated mercaptobenzothiazole. Stage 3 comprises the recycling of the liquid phases of the purification medium to reuse the unreacted starting material.

**The Difference Between the Prior Art and the Claims (MPEP §2141.02)**

The difference between the prior art of *Alicot, et al.* and the instant invention is that the applicants are dividing the liquid phase from the crystallization into three parts

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before recycling whereas the reference does not specifically teach dividing the liquid phase before recycling.

**Prima Facie Obviousness-The Rational and Motivation (MPEP §2142-2413)**

In *In re Dilnot*, 319 F. 2d 188, 138 U.S.P.Q. 248 (C.C.P.A. 1963), it was well established that batch and continuous processes are not patentably distinct. Dividing the liquid phase from the crystallization into three parts before recycling in a well known process is a mere optimization and does not make the process patentably distinct absent unexpected or unobvious results. Therefore, it would have been prima facie obvious to one having ordinary skill in the art at the time the invention was made to separate the liquid phase from the purification step in various parts before recycling the starting materials.

**V. Objections**

***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The

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disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the abstract is too long.

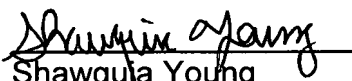
Correction is required. See MPEP § 608.01(b).

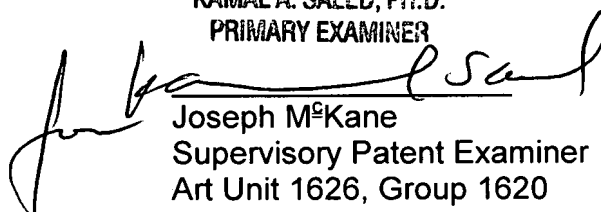
## VI. Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shawquia Young whose telephone number is 571-272-9043. The examiner can normally be reached on 7:00 AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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